Message

From: Ex. 6 Personal Privacy (PP)
Sent: 7/23/2020 4:09:52 PM
To: Strynar, Mark [Strynar.Mark@epa.gov]
Subject: RE: Question re to Chemours

Mark – this is so great that you spent the time doing this. I'll let my colleagues know

Hopefully, I can get Marian Pavuk to drive over to Anniston one day and get some water!

Linda S. Birnbaum, Ph.D., D.A.B.T., A.T.S.
Scientist Emeritus and Former Director
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From: Strynar, Mark <Strynar.Mark@epa.gov>
Sent: Thursday, July 23, 2020 8:23 AM
To: Linda Birnbaum Ex. 6 Personal Privacy (PP) om>
Subject: Re: Question re to Chemours

Linda,

I gave the paper a read and the methods section. The methods seem adequate to find fairly low levels of PFAS in serum with the LODs being sufficiently low enough and the QCs samples performing within +/- 30% of theoretical.

The criticisms I would have are the surrogates used are limited as only 13C isotope labeled PFOS, PFOA, PFNA and 4:2 FTS. It then seems only one internal standard (13C-PFHpA) is used for quantitation. I really don't like this approach as many ISs are available, I dont know why anyone would use just one. In particular one that really does not show up in human serum. I am also a bit concerned that the stable isotope labeled HFPO-DA is not used as it is one of the analytes you all are reporting on in the serum as a new finding I expect. The second criticism would be I did not find a lot of discussion about blank level PFAS data. I saw blanks mentioned a lot but no interpretation of data compared to blanks. I expect the GenX in serum is at or near the LOD of the methods, thus blank info is very important to me.

In a nut shell I would say these methods will work but there are a number of things I would improve for future studies. I hope we can figure out where the HFPO-DA is coming from you see in the people.

Mark

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From: Linda Birnbaum Ex. 6 Personal Privacy (PP) >
Sent: Wednesday, July 22, 2020 4:01 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: RE: Question re to Chemours

Here's the description, so far, in the paper we're working on re to the method....Please don't share yet..

PFAS extraction and quantitation

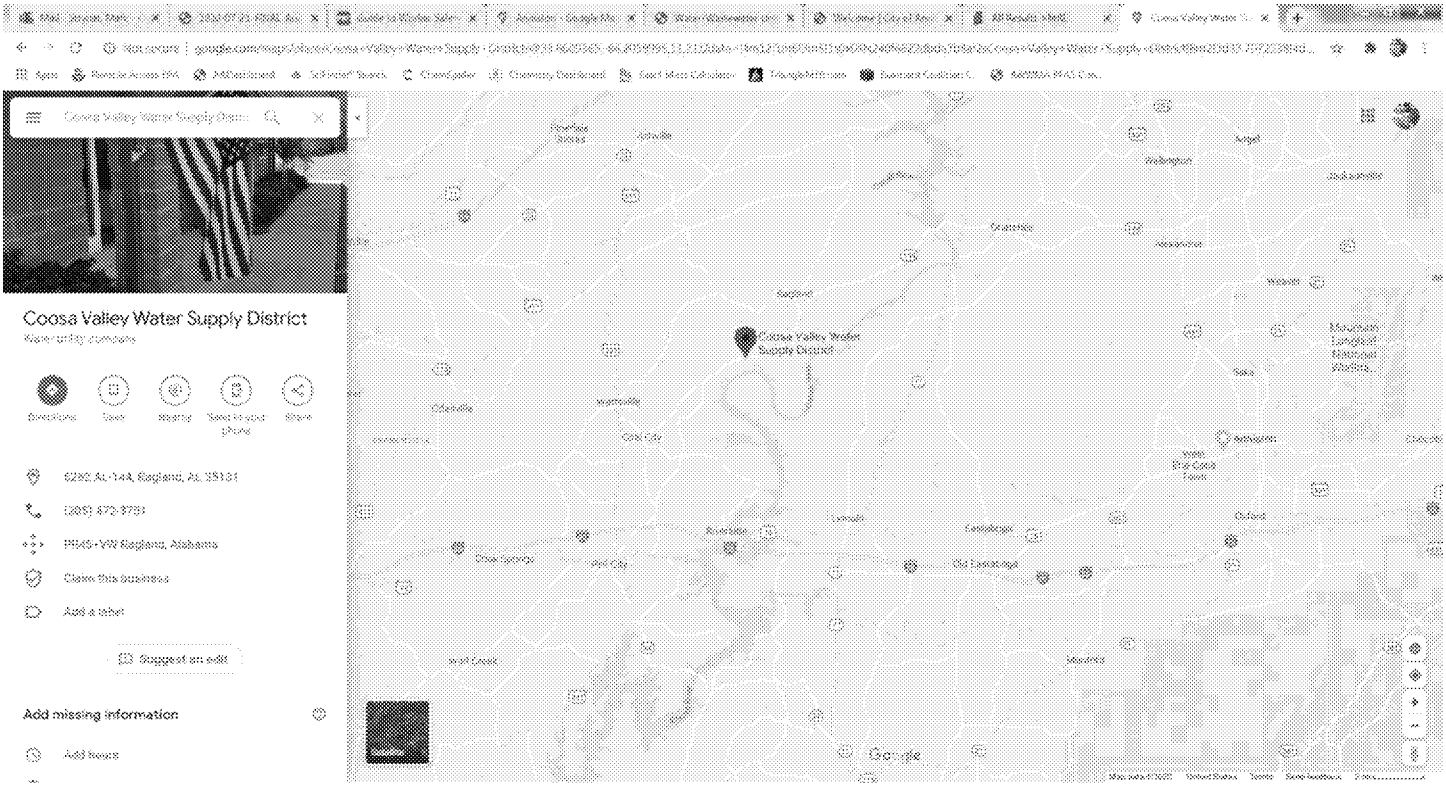
PFAS were extracted and analyzed as previously described (Mottaleb et al., 2019). Briefly, 50 µL of serum was extracted in 96-well Impact Protein Precipitation Plates (Phenomenex, CA, USA) in methanol with known concentrations of 13C isotope labeled PFAS compounds (PFOSL, PFOAL, PFNAL and FTSL) as surrogate controls. Dried extract was reconstituted in ammonium acetate that contained 3.0 ng/mL of 13C4–PFHpA as internal standard. All extraction plates contained reagent blank (R-BLK), IS-blank and quality control samples. PFAS were quantitated by UHPLC-MS/MS with a Shimadzu ultra-performance liquid chromatography (UPLC; model: Nexra X2 LC 30 AD) coupled to a Sciex QTRAP mass spectrometer (MS; model: Sciex 6500 plus) collecting in negative multiple reaction monitoring (MRM) mode. Parent and product ions for all PFAS, surrogates, and I.S. as well as instrument settings, and analytical method performance parameters have been reported previously (Mottaleb et al., 2019). PFAS were quantitated using IS-based calibration curves with limits of quantitation between 0.04 ng/mL and 0.20 ng/mL depending on the chemical (Mottaleb et al., 2019).

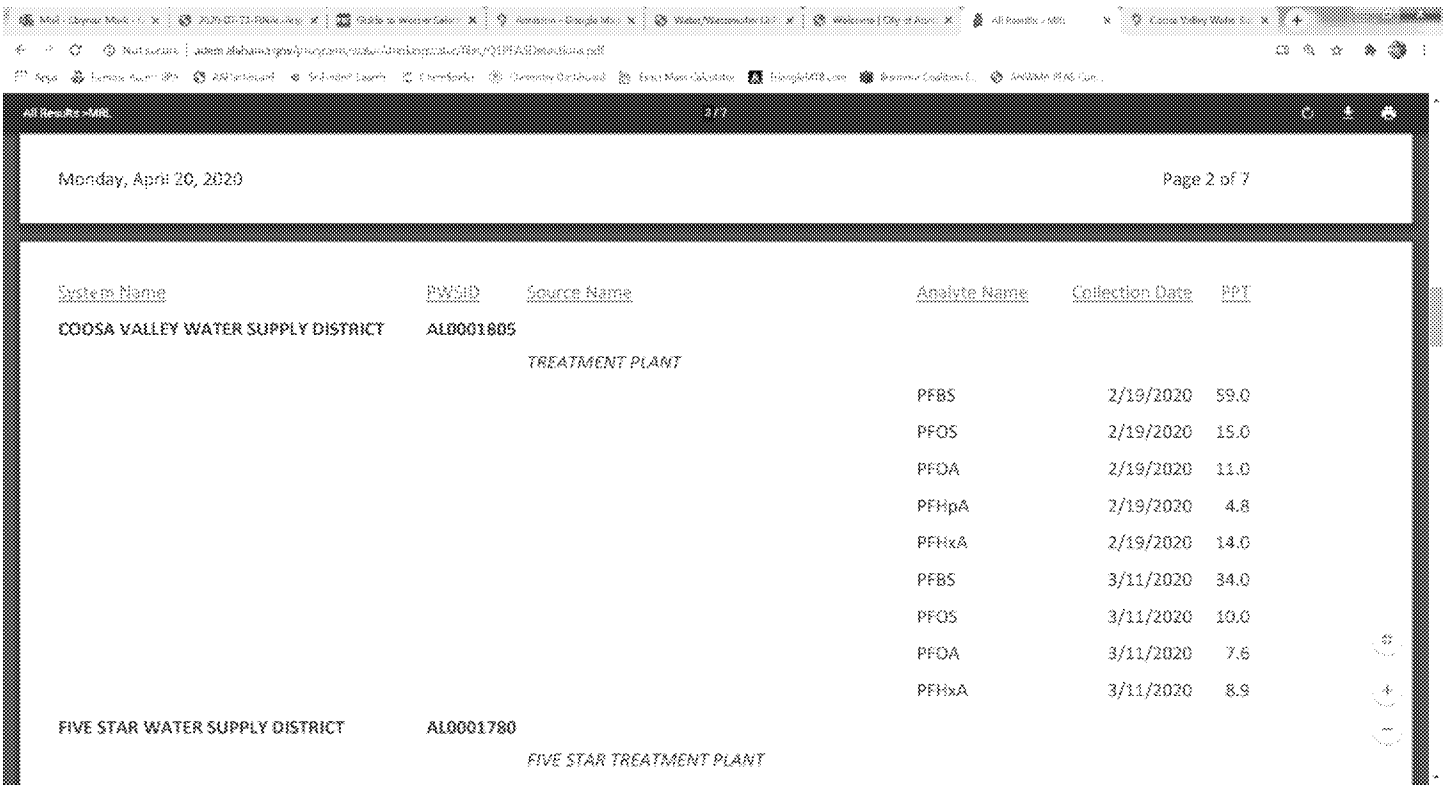
Love your thoughts…

From: Strynar, Mark <Strynar.Mark@epa.gov>
Sent: Wednesday, July 22, 2020 3:55 PM
To: Linda Birnbaum Ex. 6 Personal Privacy (PP)
Subject: Re: Question re to Chemours

I can measure what is in it. FYI I found
this http://adem.alabama.gov/programs/water/drinkingwater/files/Q1PFASDetections.pdf

Coosa Valley Water Supply District is close to Anniston, AL. Their numbers I would say look suspect with the PFBS being as high as they are. I will keep digging.
Mark





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System Name	PWSID	Source Name	Analyte Name	Collection Date	PPT
COOSA VALLEY WATER SUPPLY DISTRICT	AL0001605				
		TREATMENT PLANT			
			PFBS	2/19/2020	59.0
			PFOS	2/19/2020	15.0
			PFOA	2/19/2020	11.0
			PFHpA	2/19/2020	4.8
			PFHxA	2/19/2020	14.0
			PFBS	3/11/2020	34.0
			PFOS	3/11/2020	10.0
			PFOA	3/11/2020	7.6
			PFHxA	3/11/2020	8.9
FIVE STAR WATER SUPPLY DISTRICT	AL0001780				
		FIVE STAR TREATMENT PLANT			

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From: Linda Birnbaum [Ex. 6 Personal Privacy (PP)]
Sent: Wednesday, July 22, 2020 3:48 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: RE: Question re to Chemours

I'll try to find the link for the methods and get that to you.

I can ask where the people get their drinking water.

And I think one of us may need to go to Anniston and sample the water!

All good ideas!

Thx, Linda

From: Strynar, Mark <Strynar.Mark@epa.gov>
Sent: Wednesday, July 22, 2020 3:46 PM
To: Linda Birnbaum [Ex. 6 Personal Privacy (PP)]
Subject: Re: Question re to Chemours

Hi Linda,

I saw that in your exchange with Sue. I was just looking around on Google Maps at Anniston, AL.

Is this in serum? We have not yet found it in any human serum samples thus far. Could I check out the data and supporting info you are getting with these detection's.

As far as where it may be coming from do you know if the people get drinking water from the Coosa river. I see it flows right by the area. The Coosa starts in Rome GA which has been shown in the past to be contaminated with PFAS due to work going on upstream in Dalton, GA the carpet capital of the world. Can you get a drinking water sample to check for PFAS from the area? It is way upstream but just a thing to rule out.

I don't know if any waste trucks come by this area that may haul HPFO-DA.

Mark

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From: Linda Birnbaum [Ex. 6 Personal Privacy (PP)]
Sent: Wednesday, July 22, 2020 2:56 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: Question re to Chemours

Not sure if I've told you that we have found GenX in ~9% of our cohort in Anniston, AL. Sue Fenton thought you might know if the Chemours truck stps there. We have no idea where these people would get it from – and it was ~2% of population in 2005-7. This is our study looking at PCBs, dioxins, etc. in Anniston – place where PCBs were made from 1929—71....

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